

Mental Health and Quality of Life in Alcoholic Liver Disease Patients After Liver Transplantation: A Prospective Controlled Study

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ABSTRACT

Objective. Alcoholic liver disease (ALD) is one of the most important indications for liver transplantation. Discordant conclusions have been found concerning quality of life and mental health after transplantation in this particular group. The aim of this work was to investigate improvements in mental health and quality of life among transplanted patients for ALD.

Methods. We studied 45 consecutive transplant candidates with ALD, attending the outpatient clinics. Among these patients we transplanted 24 with the control candidates remaining in wait for transplantation.

Results. There was a significant improvement in all mental health and quality of life dimensions among the transplanted ALD group. We also observed a favorable evolution of coping mechanisms (CM) in this group.

Conclusion. There is a favorable adjustment of ALD patients after transplantation as shown in CM evolution, which might explain the improved mental health and quality-of-life dimensions.

ALCOHOLIC LIVER DISEASE (ALD) is one of the most important indications for liver transplantation. Between 1988 and 2004, 31% of liver transplants in Europe were performed in patients with ALD and 17.2% between 1988 and 2006. Many authors have demonstrated similar medical outcomes between alcoholic and non-alcoholic liver transplant recipients.^{1–4} Discordant conclusions have been reported concerning quality of life and mental health after transplantation in this group.^{5–8} The aim of this work was to investigate whether there was an improvement in mental health and quality of life among patients transplanted for ALD.

METHODS

Participants

We studied 45 ALD transplant candidates, attending our outpatient clinics between March 1, 2006 and December 1, 2007. Among these, 28 were transplanted, of whom three died and one was retransplanted. They were excluded from the study. Patients were assessed before transplantation and 12 months thereafter. Patients who remained waiting for transplantation ($n = 17$) were the control group. These patients were assessed twice—once at presentation and a second time after 12 months.

The study protocol was approved by the institutional review committee and written informed consent was obtained from all participants.

Pre- and Posttransplant Psychosocial Assessment

To measure quality of life, we used the SF-36 Portuguese validated version, a self-rating questionnaire developed by the Medical Outcome Trust.^{9,10} Total values were computed for physical and mental components of health-related quality of life.

Levels of anxiety and depression were assessed by means of the Hospital Anxiety and Depression Scale Portuguese version.^{11,12}

To access coping mechanisms, we used the Brief COPE Portuguese version,^{13,14} which was designed to yield quick, reliable, and valid measures of the 14 domains of coping strategies: self-

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Table 1. Mean Scores From Control and Study Group

| HADS and SF-36 | Pretransplantation | | 12 mo After transplantation | |
|--------------------|----------------------|------------------|-----------------------------|------------------|
| | Study Group (n = 24) | Control (n = 17) | Study Group (n = 24) | Control (n = 17) |
| HADS | | | | |
| Anxiety | 7.58 ± 4.00 | 8.53 ± 3.99 | 5.80 ± 4.34 | 8.79 ± 3.29 |
| Depression | 5.49 ± 4.10 | 6.75 ± 4.40 | 4.00 ± 2.01 | 7.43 ± 3.50 |
| SF-36 | | | | |
| Physical component | 47.00 ± 22.20 | 48.43 ± 24.30 | 69.16 ± 20.11 | 43.71 ± 24.30 |
| Mental component | 48.33 ± 20.00 | 47.3 ± 23.20 | 69.99 ± 21.13 | 55.92 ± 22.40 |

distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religions and self-blame.

Statistical Methods

Statistical analysis was performed with the SPSS 13.0 for Windows software package. Statistical difference between transplanted and nontransplanted patients were evaluated by discriminant analysis using Wilk's lambda.

RESULTS

Pre- and posttransplantation scores among control and study groups are represented in Table 1. By means of discriminant analysis, we observed no differences between study and control group regarding pretransplant variables.

Concerning posttransplant scores, we noted significant differences between the two groups among all variables, namely, anxiety, depression, physical quality of life, and mental quality of life. A significant discriminant function was found: $\chi^2 = 60.02$ ($P = .00$). This means that scores for anxiety and depression were significantly lower among ALD transplanted patients with significantly higher quality-of-life scores (Table 2).

Based on the Moos and Shaefer model, which links quality of life and mental health to coping strategies, we sought to analyze coping strategies in ALD patients after transplantation. Within the whole sample, we observed the scores for adaptive coping strategies, such as active coping, positive reframing, and acceptance, to be increased after transplantation. The opposite finding were

Table 3. Evolution of Coping Mechanisms in the Study Group (Mean Values)

| Evolution of Variables | ALD Patients (n = 24) |
|--------------------------|-----------------------|
| Coping | |
| Active coping | .27 ± .29 |
| Behavioral disengagement | -.49 ± .56 |
| Planning | .22 ± .27 |
| Instrumental support | .78 ± .90 |
| Denial | -.87 ± .92 |
| Self-blame | -.45 ± .55 |
| Acceptance | .41 ± .49 |
| Emotional support | .09 ± .11 |
| Venting | .09 ± .12 |
| Positive reframing | .94 ± .97 |
| Humor | .82 ± 1.22 |
| Self-distraction | .73 ± .97 |
| Religion | -.36 ± .46 |
| Substance use | -.19 ± .21 |

ALD, alcoholic liver disease.

noted for nonadaptive coping strategies scores, such as behavior disengagement, denial and self-blame (Table 3).

DISCUSSION

We concluded that there was a significant improvement in mental health and quality of life among recipients transplanted for ALD. We showed one possible reason is the improvement in adaptive coping mechanisms among these patients.

These results may be important in social and moral debates about the eligibility of ALD patients for transplantation. Further studies are needed in a larger sample size. (Table 2).

Table 2. Differences Between Transplanted and Nontransplanted Groups

| HADS and SF-36 Posttransplant | Wilks' Lambda | F | P |
|-------------------------------|---------------|-------|-----|
| HADS | | | |
| Anxiety | .70 | 20.90 | .00 |
| Depression | .80 | 18.35 | .00 |
| SF-36 | | | |
| Physical component | .50 | 80.34 | .00 |
| Mental component | .80 | 19.10 | .00 |

Abbreviations: HADS, Hospital Anxiety and Depression Scale; SF-36, 36-item Medical Outcomes Study Short-Form General Health Survey.

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